DCCUMENT RESUME

ED 033 945 TE 001 599

AUTHOR Erickscn, Jcan Good
TITLE Speech and Hearing Prcblems in the Classroom.
INSTITUTICN Illincis Asscciation cf Teachers cf English, Urbana.
Pub Date Jan 69
Note 19p.
Journal Cit Illincis English Bulletin; v56 n4 p1-19 Jan 1969

EDRS Price EDRS Price MF-$0.25 HC-$1.05
Descriptcrs *Aurally Handicapped, Cleft Palate, Hard of Hearing, Hearing Clinics, Hearing Loss, *Language Handicaps, Lipreading, *Cral Communication, *Referral, Speech Clinics, *Speech Handicaps, Stuttering, Teacher Attitudes, Verbal Ability, Voice Discrders

Abstract

Maintaining that teachers of English are in an cpportune pcsitiicn tc detect and help students with verbal communicatiicn prcblems, this essay provides the necessary guidance by (1) describing the varicus speech discrders cf articulation, voice, fluency, (2) listing the behavicrs indicating hearing lcss, and (3) discussing the causes and effects cf many cf these discrders. Emphasis is given tc referring handicapped students tc apprcpriate agencies and tc teacher-reinforcement of therapy programs. (RH)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE
PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION
POSITION OR POLICY.

ED033945

ILLINOIS ENGLISH BULLETIN
Official Publication of the Illinois Association of Teachers of English

VOL. 56, No. 4 URBANA, ILLINOIS JANUARY, 1969

Published every month except June, July, August, and September. Subscription price, $3.00 per year; single copies 35 cents. *Entered as second-class matter October 29, 1941, at the post office at Urbana, Illinois, under the act of March 3, 1879.* Address all business communications to IATE Treasurer, 100 English Building, Urbana, Illinois 61801. Address manuscripts and other editorial communications to Wilmer A. Lamar, Editor, 100 English Building, Urbana, Illinois 61801; or to Joan Davis, Co-Editor, 15 Forest View, Mahomet, Illinois 61853. Member of NCTE Information Agreement.

Speech and Hearing Problems in the Classroom

BY

JOAN GOOD ERICKSON

Instructor and Clinical Supervisor
Speech and Hearing Clinic
University of Illinois at Urbana-Champaign

Harold had graduated from high school and was working as a laborer. His speech was unintelligible except for occasional words which were clear enough to help a listener understand the topic. He had never received speech therapy in the schools he attended because no programs had been available. Unfortunately, no teacher had ever referred him elsewhere. Everyone in his community accepted the fact Harold "talked that way."

What are the results of a lack of adequacy in verbal communication? An individual with a speech or hearing problem may be affected socially, economically, and psychologically. Because of the need for effective communication in many vocations, a problem in this area may interfere with an individual's obtaining the type of employment he desires and for which he is otherwise qualified.

Harold met a job counselor who decided perhaps Harold would not have to be limited in his work if his speech were clearer. Following two years of intensive speech therapy,

TE001 949

Harold had improved his articulation skills and developed enough confidence in his own verbal communication to pursue a career in computer programming. He developed adequate speech skills to tackle interviews and be able to communicate on the job.

Because of the image a speaker projects, the listener's reactions, and the speaker's attitudes toward his problem, an individual with a speech problem may be affected in inter-personal relationships.

When Michael was seen for a diagnostic evaluation, he stuttered painfully through the interview. He described situations he approached daily with fear. He told of how he managed to avoid talking for several days. He never talked on the telephone. When he ordered in a restaurant, he pointed to items on the menu. This handsome high school boy with brown eyes and dark wavy hair had never dated. It was not the asking for a date as much as knowing he would have to talk to the girl while on the date that kept him from going out. When he talked to teachers, friends, or acquaintances it was an exhausting situation, and their uncomfortable reactions reinforced his negative self-image and perpetuated the entire problem.

Louis' surname was difficult to pronounce as well as spell. With a name like Tchavetnik said by a boy with an articulation problem, he was usually misunderstood and had to spell his name. Even then a person was not correctly informed, for Louis substituted *b* for *v* sounds. The saying and spelling of his name was only clarified when Louis wrote Tchavetnik.

Communication problems can affect a student academically.

Wendy had always been a poor student. She was frequently inattentive in class. Even when she appeared to be listening, she was slow at following directions and looked to see what others were doing. She made what appeared to be silly errors on spelling tests and sometimes completely missed the point of a discussion. She was shy and withdrawn and did not interact with peers. She never realized she was missing so much of the speech of others until results of a hearing test revealed she had a loss of hearing and would benefit from a hearing aid and lip reading.

Since teachers, especially teachers of English, are in an opportune situation to detect and help the student with a verbal communication problem, it is important that they be aware of

1. the types of speech and hearing disorders to look for which are typically found in a classroom,
2. the appropriate resources for referral of students with speech and hearing disorders, and
3. information concerning the causes and effects of each type of communication disorder in order to help more effectively a student with a problem.

With this information the classroom teacher should be in a better position to implement the important role of *recognizing, referring,* and *reinforcing* the therapy program of those students with communication handicaps.

RECOGNIZING SPEECH PROBLEMS

The characteristics of speech, the tool used to express language, include the following major areas: *articulation* or the production of speech sounds; *voice,* including quality, intensity, pitch, and resonance; *rhythm,* or fluency, which is one of the prosodic features of speech. Defective speech is the result of a breakdown in one or more of these areas which decreases intelligibility, pleasantness, or appropriateness of the speech pattern. Charles VanRiper in *Speech Correction: Principles and Methods* states speech is defective when it: 1) interferes with communication, 2) calls attention to itself, and/or 3) causes the possessor to be maladjusted.

Studies of the speech of school-age children as reported in *Handbook of Speech Pathology* edited by Lee Travis indicate that ten per cent fall into the category of defective speech. Half of these students show speech problems serious enough to require therapy no matter what vocation they pursue. The other half have minor problems which, however, would be significant if the individual chose a vocation requiring good speech. For example, the individual with a relatively minor voice or articulation problem (e.g., a nonstandard dialect or a whistling *s* sound) may be able to function adequately as a file clerk or custodian, but as a teacher, politician, or salesman he may not be effective.

The teacher of English should be able to recognize a deviation in speech and then refer the student for a diagnostic evaluation and possible therapy. The speech therapist will make a thorough evaluation of articulation, voice, and rhythm, as well as investigate

possible contributing factors. In other words, the classroom teacher should not decide on the severity of a speech problem, but should recognize deviations and make proper referrals.

In order to recognize speech problems, a teacher must first be aware of the types of problems which exist and factors associated with these problems. In order to identify speech problems in a classroom, a teacher must be a careful listener. He must be able to listen not only to content and organization of the verbal language but also to the articulation, voice, and rhythm aspects of speech production. In order to identify which students may have a speech problem, it is necessary for the classroom situation to promote verbal exchange.

> Linda, a freshman in high school, was enrolled in speech therapy because of her stuttering problem. When the speech therapist conferenced with each of her teachers, one teacher was astonished to learn that Linda stuttered. The therapist asked Linda how she managed to go through most of a semester without talking in class. She stuttered, "It was easy. I never raised my hand, and the few times the teacher did call on me, I just said 'I don't know.' "

As a classroom teacher you might ask yourself: Do I have an oral classroom? I know I notice written errors, but am I as alert to speech errors? Do I recognize speech problems or do I just accept the way the student talks? Am I so involved in teaching content and written expression that I am unaware of how the students are expressing themselves verbally?

Articulation Disorders

Of all the types of speech problems, disorders of articulation are the most common. Approximately eighty per cent of all speech disorders in the school are articulation problems with nearly half of these being characterized by defective production of the phoneme *s*. (See *Speech Handicapped School Children* by Wendell Johnson, *et al.*) Other commonly misarticulated speech sounds include defective production of *r, l, th* (voiced as in *the* and voiceless as in *think*), *sh, ch, j,* and *z*. However, any of the twenty-five consonant sounds or nineteen standard vowels, *r*-colored vowels (as in *bird* and *butter*), and diphthongs may be incorrectly articulated.

The first question teachers must ask themselves when listening to the individual is "What sounds, if any, are in error?" It is

important that teachers ignore orthographic representations of words and analyze them acoustically. For example, when the first sound in the word *see* is defective, the problem would be poor *s* production; however, poor *s* production does not properly describe the problem of those individuals who have difficulty with the initial sound in the word *sugar* (the defective phoneme would be *sh* as in *show*) or of those who have difficulty with the final sound in the word *is* (the defective sound would be *z* as in *zoo*) even though orthographically the misarticulated sound is represented by the letter "s."

The next question to ask is "What type of error is made?" The four types of errors which may occur are: substitutions, distortions, omissions, and insertions. *Substitutions* are characterized by an appropriate sound being replaced by another sound which is in the repertoire of the language. Most substituted sounds resemble the appropriate sound in one or more characteristics of production. For example, *w* as in *we,* which is a glide characterized by movement of the lips, is a common substitution for *r* as in *red,* which is a glide made with the tongue and hard palate, or for *l* as in *look,* which is a glide made with the tongue and gum ridge. Also, *t* as in *tree,* which is a voiceless plosive made with the tongue and gum ridge, is a common substitution for the *th* as in *three,* which is a voiceless fricative (result of friction between the air and articulators) made with the tongue between the teeth.

Distortions are sometimes confused with substitutions or not recognized specifically by the listener. Distortions are approximations of the expected phoneme such as weak production of the consonant *r* or semi-vowels or a distorted *l* made by using the back rather than the front part of the tongue. Included in this group is the frontal lisp made by putting the tongue between the teeth rather than behind when producing the phonemes *s* and *z.* This distortion resembles the voiceless *th* sound and frequently occurs on the other sibilants *sh, ch, j,* and *zh* as well. Another type of distortion of sibilants is called a lateral lisp, which is made by humping the tongue and forcing the air out laterally, making a "slushy" or "juicy" sound.

Omissions should be self-explanatory. This error may especially occur in more difficult phonetic environments such as in initial or final blends: *top* for *stop, han* for *hand, gohd* for *gold.*

Insertions are characterized by the addition of a phoneme in a word. The typical error of this type is the insertion of a *g* or *k* after an *ng* sound resulting in *sing-ging a songk.* It is easy to understand why this insertion occurs: The tongue placement for

ng is the same as for *g* and *k* with the variation in production achieved by nasalizing one and orally exploding the other two. Also, if an individual takes the command literally to "pronounce every letter distinctly!" he may attempt to add the *g*. This command, incidentally, is a very poor one to give in that normal connected speech is characterized by elision of phonemes and not over-exaggeration. If a teacher insists upon precise articulation, the individual may end up with a very stilted speech pattern.

The last question to ask is "When does the error occur?" Some articulation errors are consistent and some are inconsistent. The error may occur in one or all positions of a word (initial, medial, or final, such as the *s* heard in *see, passing,* and *house*). The problem may be related to the phonetic environment of a word, which may affect whether or not the sound is defective (e.g., *r* before an *ee* sound may be more defective than when made in a consonant blend). Also, some individuals may be able to produce a phoneme correctly in a single word but cannot maintain its production in connected speech.

Causes of articulation disorders may be due to organic or inorganic factors. Organic factors may include deviations in the oral structure such as a poor dental structure (e.g., poor occlusion of the front teeth) or a defective palate (e.g., a cleft palate which has been repaired but is still inadequate). Poor control of the muscles associated with articulation (tongue, lips, soft palate) may occur with cerebral palsy or cases of mildly retarded motor development. Hearing problems may affect articulation if the individual does not receive the proper stimulus and is not able to auditorily monitor his own production. This would be true if there were a loss of acuity for all of the speech frequencies or if the decreased acuity affected only the higher frequencies of the speech range. In the latter case, the hearing of and consequently the production of high frequency speech sounds such as *s, f, t, p, k,* or voiceless *th* could be primarily affected.

Nonorganic causes of articulation disorders are numerous and, in general, include any factors which initially interfered with early speech development or are still maintaining the problem. Since speech is learned through imitation, poor speech models may be a causative factor. These models may be parents, siblings, or peers with speech problems. Bilingualism in the home or neighborhood may cause confusions in speech patterns. Dialectal deviations related to community, ethnic, or racial backgrounds may provide speech models which an individual imitates and incorporates into his speech pattern. Improper help by parents and

teachers who are well-meaning but lack information as to how to modify sound production may contribute to causing or maintaining a problem. If a student feels self-conscious about an unattractive dental structure he may attempt to cover this up by a lack of oral activity resulting in general misarticulation. Oral inactivity may also be a projection of an individual's personality.

> In high school Barbara was described as a withdrawn girl who seldom spoke. When she did, she mumbled, barely moving her lips or opening her mouth. Her clothes and heavy makeup were in contrast to that of her peers in this primarily upper-middle-class school. Teachers recognized her various problems, including speech, and subsequently a referral was made to the high school speech therapist. It was difficult to establish rapport with Barbara, and she refused to allow the therapist to examine the structure and control of her speech mechanism. Several sessions later it was learned why Barbara probably had little oral activity during speech. All of her teeth which had formerly been rotted and crooked were now removed. For years she had tried to hide her poor oral structure by keeping her mouth closed. By working through a public aid agency in order to get her full dentures, by referring her to counselling services, and by providing speech therapy, the therapist helped a new Barbara emerge.

Several other circumstances during childhood, such as lack of a need to talk better or acceptance of infantile speech patterns which at that time were reinforced because they were "cute," may have originally caused the problem now present.

Voice Disorders

Frequently voice disorders are overlooked by classroom teachers. The statements "He always talks that way; he probably has a cold; it's his adenoids; everyone in his family sounds like that" reflect a lack of understanding of or concern for voice problems. Voice disorders can usually be improved medically or through speech therapy. Consequently, unpleasant or inappropriate intensity, quality, and pitch usage should be recognized and referred.

Disorders of *intensity* include a too loud or too soft voice. These problems may be due to psychological factors or learned behavior or may reflect an organic condition such as hearing loss. The classroom teacher, in attempting to correct a student who speaks too loudly, may tell him, "Lower your voice; you're much

too loud." This semantic error (lower and higher refer to differences in pitch whereas louder and softer refer to differences in intensity) may be misleading. Also, to tell a person to speak louder may result in an additional change in pitch in that these two aspects of voice are physiologically associated in production.

> Chuck had an articulation problem but normal voice characteristics and was progressing well in speech therapy. One day he came to his session speaking in a low, gutteral voice. "What happened to your voice this past week?" It was a simple explanation. His father, who was hard of hearing, had been fitted with a hearing aid and was evidently having difficulty adjusting to the new intensity. Chuck took his father literally when he said to his family, "Speak lower, speak lower; it's too noisy!"

Disorders of *quality* may be due to functional reasons but are frequently related to organic factors. Because of this it is important that a referral be made to a speech therapist, who may then make a medical referral for a complete oral-laryngeal examination. Quality disorders are related to misuse or malfunctioning of basically two speech structures, the larynx and the soft palate-pharyngeal wall mechanism. Disorders related to the larynx may result in a voice quality which can be described as "husky, harsh, hoarse, breathy, gutteral." If this condition is due to growths on the vocal folds because of chronic or acute misuse of the laryngeal structure, medical follow-through is imperative. Quality disorders related to the use of the soft palate-pharyngeal wall mechanism result in problems with resonance balance. A voice with too much nasal resonance, especially noticeable on vowels, is termed hypernasal. A voice which lacks normal resonance and may even cause nasal consonants to become oral (e.g., *m* becomes *b*) is termed hyponasal, or a voice typically associated with having a cold.

Disorders of *pitch* may have a functional cause, such as poor learning or associated personality problems. In some cases the disorder may have an organic basis. Because of improper use of the laryngeal mechanism, pitch problems are also associated with and accompany quality disorders. A pitch which is too high or too low to be appropriate to the individual or pleasant to the listener or a pitch pattern which lacks variation or is stereotyped (e.g., sing-song patterns) would be termed a disorder of pitch.

> When Les talked over the phone the listener would be amazed when he realized it was Mr. and not Miss. Startled

facial expressions on strangers were common occurrences when they heard or overheard Les talk. He sought help from a speech therapist and subsequently learned to use a new pitch level in therapy. On the day Les started using his more appropriate pitch in his classes there were again startled expressions from peers who knew him, but this time it was for positive reasons.

Evaluating the pitch range and determining the optimum level for voice production is a necessary step in retraining. However, this testing and subsequent voice retraining should be done by a trained speech therapist. To tell a person to talk in a higher or lower pitch without determining the pitch which is physiologically appropriate for him would be inadvisable and may only create a new problem of quality. Pitch breaks, sometimes downward but usually upward, are common with the adolescent male who is learning to adjust to the use of an adult larynx. These embarrassing experiences, especially if negatively reinforced by listener reactions, may force the individual to over-control his pitch and use a monopitch.

Fluency Disorders

No one is completely fluent, but to some individuals a lack of fluency is an ever-present problem. When there is more than the normal amount of interferences in the rhythm of speech, the listener frequently refers to this condition as "stuttering." Furthermore, what appears to be only a normal amount of nonfluency to the listener may be thought of by the speaker as stuttering. If this speaker is convinced he stutters, even though he appears fluent, he also has a problem. In general, stuttering varies in severity and has a variety of effects on both listeners and speakers.

Terms used to describe fluency problems include repetitions of sounds, parts of words, words or phrases (e.g., I s-s-s-s-saw him at ho-ho-ho-home); prolongations of sounds or parts of words (e.g., I sssssssssaw him); silent blocks (e.g., I saw–silence frequently in a mouth position for the next word–him); interjections (e.g., I saw-uh-uh-uh-uh-uh him); revisions (e.g., I saw him at . . . . . on the way home). Secondary behaviors, or behaviors not directly related to speech production, may also accompany the speech pattern. For example, when stuttering, the individual may snap his fingers, thrust out his tongue, manifest facial contortions, or avoid eye contact with the listener.

Because the stutterer may consider speaking an unpleasant

and uncomfortable task, he may avoid speaking situations. This can vary in extremes depending on the stutterer's attitude.

> Ralph never called anyone on the telephone nor did he answer it if it rang. When working at his office job, he always managed to let someone else answer, and when he was alone in the office the phone went unanswered.
>
> A young policeman stuttered severely and frequently avoided talking. He usually avoided saying his name to the point he would give a pseudonym, an ironic situation for a policeman.
>
> Mark was assigned at the beginning of therapy to keep a record of the number of verbal contacts he participated in during a one-week period. The list revealed his level of avoidance: One day the only thing he said was "Excuse me" when he bumped into someone; another day he had to answer "here" to a roll call; a third contact regarded a two-sentence conversation with someone he knew; the rest of the week he had not talked at all.

It has been found that the severity of stuttering varies with the amount of anxiety concerning it. The less anxiety associated with a verbal interaction, the less stuttering occurs. The following conditions have been classified by Oliver Bloodstein, as reported in Wendell Johnson's *Speech Handicapped School Children,* as situations in which anxiety reduction occurs:

1. Situations involving reduced communicative responsibility (e.g., when talking to oneself, to pets or babies).
2. Absence of unfavorable listener reactions (e.g., the listener does not fill in words for the stutterer or avoid looking at him, show sympathy or disgust, or exhibit other behaviors which indicate to the stutterer that the listener has adverse reactions).
3. Reduced need to make a favorable impression (e.g., more anxiety may be associated with meeting new people, talking to persons in authority such as teacher, parents, employer, or talking to a group in contrast to talking with a listener who is not threatening).
4. Considerable change in speech pattern (e.g., when speaking with an accent, in a very loud voice, with a metronomic rhythm or in such a way as to play the role of another speaker and consequently distract himself from being aware of his stuttering).

5. Accompanying activity (e.g., speaking in time with walking, swinging the arms, or some method of performing a motor distraction).
6. Strong or unusual stimulation (e.g., reading in a chorus with others, group singing, loud background noise, delayed auditory feedback, or when in a highly excitable state or among other types of distractions which are predominant over the fear of stuttering).

Although stuttering is decreased in these situations, practice in these areas does *not* necessarily cure the stuttering. Successful therapy approaches incorporate procedures which are designed to create attitude changes upon which improved fluency in all situations is achieved.

The question "What causes stuttering?" is frequently asked. Many theories have been proposed and therapy has been based on these theoretical considerations. Theories of cause and treatment of stuttering have advanced since the time Demosthenes put pebbles in his mouth or Old World physicians cauterized the tongue to get rid of the excess moisture thought to cause stuttering or cut a wedge out of the tongue because they thought stuttering was due to the fact the tongue "clave" to the roof of the mouth. A great deal of research has been done in the area of finding the cause of stuttering, the conclusion being that the problem is probably due to many factors. Contemporary research is being directed toward two more important questions, "What maintains the stuttering?" and "What can be done to modify this learned behavior?"

It is known that stuttering is increased as a person tries not to stutter. Anticipating he may stutter, he becomes apprehensive and tense and tries to avoid stuttering. This pattern becomes learned for the more the stutterer tries not to stutter, the more he does, so the more he does, the more he tries not to, and *ad infinitum*. Certainly commands such as "Stop stuttering!" are obvious negative reactions by a listener which are of absolutely no help to the stutterer, for that is exactly what he is trying to do, and the listener is consequently contributing to his problem. Furthermore, a listener is indirectly saying the same thing, "don't stutter," when he says "Stop and start over again. Think about what you're saying. Take a deep breath and say it again. Spit it out; can't you talk?" A listener also creates a frustrating situation for the stutterer when he fills words in or finishes sentences for him.

The teacher should call on the stutterer just as he would call on any other student. The stutterer should be given an opportunity to talk as well as have an opportunity to succeed in nonverbal sit-

uations. The teacher can help build the stutterer's self-confidence and make him feel better about himself. A good mental health program which is designed to increase assets and decrease liabilities is as appropriate for the student who stutters as it is for the other students in a class.

RECOGNIZING HEARING PROBLEMS

Because the hearing channel is the main medium for acquiring speech and language patterns and subsequent information, deficient hearing may interfere with various areas of learning. Most hearing losses are discovered in the preschool and elementary grades through audiometric screening tests as a part of a hearing conservation program. However, some students may have a previously undetected or recently acquired hearing problem. Behaviors which would lead an observer to suspect a student has a hearing loss include:

1. Poor articulation, especially of the high frequency speech sounds such as *s, f, t,* etc.
2. Poor auditory discrimination between similar sounding phonemes such as *s-f, p-t, m-n.* In other words, the individual may hear speech but it is not clear.
3. Continued inattention or lack of interest in conversation.
4. Failing to respond when called on or appearing surprised when suddenly aware someone is speaking to him.
5. Turning the head to put one ear toward the speaker or cupping the ear with the hand.
6. Showing differences in his response in a quiet *vs.* a slightly noisy background or to a female *vs.* a male speaker.
7. Moisture or discharge from the ears, frequent earaches, colds or upper respiratory ailments, or complaints of noises in the ear.
8. Failure to progress in aural subjects, especially when compared to subjects with less emphasis on hearing.
9. Apparent reliance on watching the speaker's face.
10. Frequent requests for the speaker to repeat part or all of what was said or often saying "huh" or "what."

Although some of the above behaviors may be due to reasons other than hearing loss, if a teacher questions the hearing of a student, a proper referral should be made. The results of audiometric testing will either eliminate hearing loss as a factor or identify the type and severity of the loss so an effective remedial program can be planned and developed.

There are three types of hearing losses due to organic causes. A *conductive* hearing loss occurs when there is malfunctioning of the outer or middle ear mechanism, including the ear canal, ear drum, bones, and cavity of the middle ear. These types of losses, especially if detected early, are usually amenable to medical or surgical correction or improvement. A *sensori-neural* hearing loss is due to malfunctioning in the inner ear, which contains the nerve endings, or along the neural pathways to the brain where sound is interpreted. These types of losses cannot be corrected medically. However, depending on the loss, this individual can be helped through use of a properly fitted hearing aid, classroom adjustments, and aural rehabilitation provided by a speech therapist. The third type of loss is called a *mixed* loss, which is characterized by both conductive and sensori-neural impairment.

Hearing thresholds for pure tones and speech reception as well as auditory discrimination ability are evaluated by an audiologist who is trained in the measurement of hearing He also conducts a hearing aid evaluation to determine if the individual would benefit from amplification which can then be purchased from a hearing aid dealer. Specialized medical or surgical treatment is provided by an otologist, a medical doctor who specializes in the treatment of disorders of the hearing mechanism.

A hard-of-hearing individual will have varying needs, usually depending on the type and severity of the hearing problem. If therapy is indicated, the speech therapist will provide a program in one or more of these basic areas of aural rehabilitation:

1. Speech (lip) reading: Learning to interpret visible movements of the speech mechanism (not only the lips) and to utilize associated information sources (facial expression, gesture, situation, etc.) in order to comprehend the speaker's message. In practice the individual uses this skill to supplement the acoustic signal he receives.
2. Auditory training: Learning to use residual hearing to the best advantage, including discriminating between phonemes as well as understanding speech in background noise.
3. Speech therapy: Improving verbal communication skills as related to the hearing loss.
4. Hearing aid adjustment: Learning to use a hearing aid effectively as well as adjusting to the problems which may occur when amplification is worn.

The classroom teacher must be aware of the problems the hard-of-hearing student may have and make classroom adjustments. Preferential seating may be indicated. This would mean

the student would need to sit in the classroom in a position which allowed for ease in listening and speech reading. The student with a loss in one ear only will not experience much difficulty in general because he has one ear functioning normally. However, he should be allowed to sit near the front and to the side so the good ear is toward the teacher and class. Students with a hearing loss in both ears should be given preferential seating in the center near the front of the room. A first-row seat may not be advisable if the student needs to speech read and finds he is always having to bend his head backward in order to see the teacher.

> Woe to the hard-of-hearing student whose name begins with Z and is in the class of an inflexible teacher who seats all students alphabetically.

If the teacher instructs from the front as well as at a desk in the back of the room, added problems are given to the hard-of-hearing student. A teacher must also be aware that when he stands in front of a window while talking he creates a poor condition for constant speech reading because of the glare. A teacher who wanders around the classroom while he talks gives the hard-of-hearing student a moving target to speech read as well as varies the intensity of the speech signal. Trying to speech read a teacher who talks while facing the chalkboard as he writes is obviously impossible. Exaggerated mouth movements are difficult to speech read, and, conversely, a speaker who mumbles or covers his mouth sends a poor visual as well as auditory signal.

The student who wears a hearing aid may have to find a satisfactory room position which does not cause problems of sound reflection, e.g., he should be away from hard wall surfaces. Noise, made by people or machinery, presents difficulty to the hearing aid wearer in sorting out the speech signal from the background noise. If a hearing aid is worn on only one of the defective ears, a usually satisfactory fitting, the person may still have difficulty localizing the sound source because a stereophonic condition is not available. In most cases the teacher should discuss with the hard-of-hearing student and the speech therapist what classroom adjustments would be helpful for the individual.

REFERRING SPEECH AND HEARING PROBLEMS

The ordinary English teacher is not trained to be a diagnostician in speech and hearing disorders. However, a teacher who is

alert to and concerned about the verbal communication of his students will assume the responsibility for referring individuals he suspects of having a speech or hearing problem to the appropriate source for evaluation and possible therapy. The professional services available to a classroom teacher for referral of speech and hearing problems vary greatly in each location. Also, the method of referral to speech and hearing services may vary, depending on the school policy. If a full- or part-time speech therapist is employed in a school, a teacher usually makes speech referrals directly to the therapist. Public school audiologists are rare, so school health personnel are usually responsible for the hearing conservation program. Hearing referrals should be made through the appropriate service for that school. Frequently hearing referrals are made through health personnel who will make initial evaluations and then refer the individual to the speech therapist or to an outside source for a more complete audiological evaluation.

Students with speech or hearing problems may be identified through screening programs. If a school has an extensive speech therapy program, the speech therapist may have a system for surveying students in order to locate individuals with speech problems. In addition, a hearing conservation program would include the audiometric screening of students at various grade levels. However, teacher referrals are always welcomed and necessary, for even though a student passes a screening test at one time, speech patterns and hearing ability may vary. Also, new speech problems, especially in the area of voice and fluency, and hearing problems may develop, or previous problems may recur.

Explaining to the student the need for effective verbal communication and encouraging him to follow through on the speech or hearing referral is a task the teacher may find challenging as well as rewarding. An understanding teacher will be aware this referral is bringing attention to a very personal aspect of an individual — his communication. A student may be defensive regarding the suggestion that something is wrong with his speech or hearing. However, for the following reasons the teacher should not be discouraged if a student simply states he does not think he has a problem:

1. The student's overt reaction may not truly reflect his feelings.
2. He actually may not be aware of his problem.
3. He may not be well enough informed as to the importance of effective communication, socially and vocationally.

> A stocky football player had a severe frontal lisp. He insisted there was nothing wrong with his speech. He reported that his peers never said anything was wrong with his speech since he handled these confrontations with a verbal or physical rebuke which discouraged any further comments. In fact, throughout his enrollment in speech therapy he insisted, "There's nothing wrong with the way I talk." He stated he would come to therapy because he had to, even though it was not mandatory. The denial continued throughout the semester, but in spite of this negativism, his speech pattern began to improve. At the time of dismissal from therapy, he insisted he did not lisp. By then he was right; he did not.

In the state of Illinois during 1967-68 there were sixteen secondary school districts, primarily in the Chicago area, employing one or more full-time speech therapists. Throughout the state, high schools may have token services available. In some areas there is no speech therapist in either the primary or secondary school system. When a therapist is not available, the teacher may investigate other sources for referral. Depending on school policy, these referrals may be handled through the principal, counselor, special education consultant, or school nurse, or directly through the parent or student.

Other sources available in a community may be hospital clinics or university or college clinics associated with training programs in speech and hearing science. Included in the Appendix is a list of Illinois universities and colleges with speech and hearing clinic facilities.

There are two agencies in the state of Illinois which would be helpful in locating referral sources, coordinating remedial services, and, in needy cases, providing financial assistance as related to the communication problem. To obtain help for children up to age twenty-one who have communication problems from organic causes, the teacher can contact the Speech and Hearing Consultant, University of Illinois Division of Services for Crippled Children, at one of the two main offices: 540 Iles Park Place, Springfield, Illinois 62703; or 11th Floor, Red Cross Building, 43 East Ohio Street, Chicago, Illinois 60611. For individuals sixteen and older who have communication problems from organic or non-organic causes which will interfere with adequate vocational placement, contact the Office of the Division of Vocational Rehabilitation (a state branch of the federal Rehabilitative Services Administration), 623 East Adams Street, Springfield, Illinois

62706. Both of these agencies also have several area offices throughout the state.

Private therapy by a qualified speech therapist may be another resource available in a community. Names of these individuals may be obtained through a professional listing of speech and hearing services.

The American Speech and Hearing Association is the national professional organization for persons in the field of speech and hearing. Members must hold a master's degree or equivalent with major emphasis in speech pathology, audiology, or speech and hearing science research. A Certificate of Clinical Competence is granted to members who desire to fulfill the qualifications in order to conduct clinical services. By consulting the American Speech and Hearing Association Directory or writing to the national office (ASHA, 9030 Old Georgetown Road, Washington, D.C. 20014), a list of clinical services and of members and their qualifications can be obtained for various geographical areas of Illinois as well as all other states.

REINFORCING THE THERAPY PROGRAM

It is the author's contention that if a classroom teacher understands the causes and ramifications of a communication disorder, that teacher's professional and intellectual ability coupled with common sense will give him direction in managing attitudes toward an individual with a speech or hearing problem and in reinforcing the student's therapy program. The teacher's attitude will determine whether or not the atmosphere in the classroom is positive and unemotional in accepting communication problems. A negative environment will be developed if the teacher does such things as not calling on the stutterer, teasing the boy with the pitch breaks, limiting the individual with an articulation problem to participating in only minor verbal activities, or staring at a hearing aid worn by a student.

When a student is enrolled in therapy, the teacher can be helpful to the individual through cooperative efforts with the speech therapist. The therapist will appreciate reports of the student's speech progress as observed by the teacher in the classroom. Discussions with the therapist will reveal ways in which the therapy program can be reinforced in the classroom or correlated with the student's work. *The teacher is not expected to nor should he assume the responsibility of the correction of the disorder.* Many a well-meaning but overzealous or psuedo-informed person has

done more harm than good in attempting to correct the communication problem of an individual. If a teacher reads information on how to remove an appendix or perform a heart transplant, he, hopefully, does not reach for the scalpel. To be of help to a student with a speech or hearing problem, the teacher must *recognize, refer,* and *reinforce.*

ILLINOIS COLLEGES AND UNIVERSITIES WITH SPEECH AND HEARING CLINICS ASSOCIATED WITH TRAINING PROGRAMS

Carbondale: Southern Illinois University

Champaign: University of Illinois at Urbana-Champaign

Charleston: Eastern Illinois University

Chicago: St. Xavier College

DeKalb: Northern Illinois University

Edwardsville: Southern Illinois University at Edwardsville

Elmhurst: Elmhurst College

Evanston: Northwestern University

Joliet: College of St. Francis

Macomb: Western Illinois University

Normal: Illinois State University

Peoria: Bradley University

Rock Island: Augustana College

RESOURCE BOOKS FOR CLASSROOM TEACHERS

Denes, P. B., and Pinson, E. N. *The Speech Chain.* Garden State/Novo, Inc., New York, 1964.

Eisenson, Jon, and Ogilvie, Mardel. *Speech Correction in the Schools,* Second Edition. The Macmillan Co., New York, 1963.

Johnson, Wendell, *et al. Speech Handicapped School Children,* Third Edition. Harper and Row, Publishers, New York, 1967.

VanRiper, Charles. *Speech Correction: Principles and Methods,* Fourth Edition. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1963.

REFERENCES

1. Black, Martha. *The Illinois Plan: Speech Correction in High Schools.* Circular Series E-1, No. 12, State of Illinois. Office of the Superintendent of Public Instruction, Springfield, Illinois, 1960.
2. Johnson, Wendell, *et al. Speech Handicapped School Children,* Third Edition. Harper & Row, Publishers, New York, 1967.
3. Travis, Lee E. *Handbook of Speech Pathology.* Appleton-Century-Crofts, New York, 1957.
4. VanRiper, Charles. *Speech Correction: Principles and Methods,* Fourth Edition. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1963.